Constraints on Coordination in English

Youngjun Jang

This paper examines various types of coordination structures in English. Unlike regular coordinate structures, some data show that the coordinately conjoined elements are syntactically different categories, thus violating Chomsky's same type condition and Williams's Law of the Coordination of Likes. I show that the coordination of the unlike categories dubbed as CUCs in the literature can best be accounted for by a semantically oriented condition such that constituents can be coordinately conjoined if they are semantically connected with each other.

1. Introduction*

This paper examines various types of coordination structures in English, in particular coordination of (syntactically) unlike categories like (1-3):

(1) a. John is [$_{AP}$ clever] and [$_{NP}$ a hard-working student].
    b. I am [$_{VP}$ hoping to get an invitation] and [$_{AP}$ optimistic about my chances].
(2) a. John walked [$_{ADV}$ slowly] and [$_{PP}$ with great care].
    b. They asked [$_{NP}$ the time] and [$_{CP}$ where the bathroom was].
(3) a. [$_{CP}$ That Himmler appointed Heydrich] and [$_{NP}$ the implication thereof] frightened many observers.
    b. [$_{ADV}$ Slowly] and [$_{PP}$ with great care] was how they walked.

---

* Earlier versions of this paper were orally presented at the Annual Meeting of the New Association of English Language and Literature, Kyungpook University in the February of 1999, and at the 34th Annual Linguistics Conference of the Language Research Institute, Seoul National University, in the December of 2000. I would like to thank the audiences at these conferences for their helpful comments and feedback. In particular, I owe my special thanks to Sung-Yun Bak, Suk-Jin Chang, Chungmin Lee, Hyun-Woo Lee, and Jong-Yurl Yoon for their comments on this paper. All errors are, however, my own. This research was supported by the Chung-Ang University Research Grants in 2000.

Unlike regular coordinate structures, the examples in (1-3) show that the coordinately conjoined elements are syntactically different categories. For example, in (1a) and (1b), the conjoined constituents are AP/NP and VP/AP, respectively. In (2a) and (2b), the conjoined constituents are ADV/PP and NP/CP, respectively. Again in (3a) and (3b), the conjoined constituents are CP/NP and ADP/PP, respectively.

The data in (1-3), however, pose a serious problem to what is known as the Law of the Coordination of Likes (LCL) formulated in Williams (1983):

(4) The Law of the Coordination of Likes
The category of conjoined elements must be the same.

There have been various attempts to incorporate the coordination of the unlike categories like those in (1-3) into the general condition (4). For example, Dougherty (1970), Kim (1996), Lakoff (1986), Munn (1993), Sag et al. (1985), and Williams (1983), among many others, try to maintain the condition (4) in one way or another. In particular, Kim (1996) claims that the problem posed by the data in (1-3) is only apparent and that they respect the LCL and fall into the same domain of analysis. His analysis, which I will see shortly in the next section, heavily depends on the across-the-board (ATB) movement, thereby allowing the same categories to be conjoined. I show that this kind of purely syntactic analysis is not viable.

Instead, I shows that the coordination of the unlike categories dubbed as CUCs in the literature can best be accounted for by a semantically oriented condition given in (5) below:

(5) A Semantic Condition on Coordinatioon
Constituents can be coordinately conjoined if they are semantically connected with each other.

Section 2 briefly reviews the previous analyses of the CUCs, in particular discussing rather in detail Kim's (1996) analysis based on the ATB movement approach. Section 3 proposes a new analysis based on the semantic condition (5) and reexamine the problematic data in terms of this condition. Section 4 discusses the distance effect in case licensing and other related area. Section 5 is the conclusion of this paper.

2. Previous Analyses

As discussed in the Introduction, syntactically unlike categories are coordinately conjoined, seemingly violating Williams's (1983) condition (4). This is illustrated by examples in (6) below:

(6) a. Pat is a Republican and proud of it. (NP and AP)
b. Pat is healthy and of sound mind. (AP and PP)
c. That was a rude remark and in very bad taste. (NP and PP)

In (6a), an NP and an AP are coordinately conjoined. In (6b), an AP and a PP are coordinately conjoined. And in (6c), an NP and a PP are coordinately conjoined.

In an attempt to explain this kind of coordination of unlike categories, Sag et al. (1985) propose that so-called predicative categories can be coordinately conjoined even though they are unlike categories. They provide the following examples in support of their claim:

(7) a. John is [$_{AP}$ clever] and [$_{NP}$ a hard-working student].
b. I am [$_{VP}$ hoping to get an invitation] and [$_{AP}$ optimistic about my chances].

According to them, the unlike categories AP *[$_{AP}$ clever]* and NP *[$_{NP}$ a hard-working student]* in (7a) are predicates in the sentence. Likewise, the unlike categories VP *[$_{VP}$ hoping to get an invitation]* and AP *[$_{AP}$ optimistic about my chances]* in (7b) are predicates in the sentence.

However, Sag et al.'s (1985) claim that unlike categories can be coordinately conjoined if they are predicates can not be maintained in cases like the following:

(8) a. They asked [$_{NP}$ the time] and [$_{CP}$ where the bathroom was].
b. They know [$_{NP}$ the questions] and [$_{CP}$ how to answer them].

In (8a), the conjoined constituents, namely *[$_{NP}$ the time]* and *[$_{CP}$ where the bathroom was]*, are not predicates. In (8b), the conjoined constituents, namely *[$_{NP}$ the questions]* and *[$_{CP}$ how to answer them]*, are not predicates, either.[1]

---

[1] Hyun-Woo Lee (personal communication) notes that the CPs *[$_{CP}$ where the*

Facing such cases where unlike categories are coordinately conjoined even though they are not predicates, Munn (1993) proposes that Williams's (1983) LCL should be interpreted as a semantic constraint on coordination involving such concepts as Manner and Time. Consider the following:

(9) a. John walked [ADV slowly] and [PP with great care]. (Manner & Manner)
b. *John walked [PP with great care] and [PP on Tuesday]. (Manner & Time)

According to Munn's account, (9a) is acceptable because the two coordinately conjoined constituents, namely *[ADV slowly]* and *[PP with great care]*, belong to the same semantic category Manner. Note that these constituents are unlike categories and not predicates in the sense of Sag et al. (1985). On the other hand, (9b) is unacceptable because the two coordinately conjoined constituents, namely *[PP with great care]* and *[PP on Tuesday]*, do not belong to the same semantic category. In this case, the former belongs to Manner and the latter belongs to Time, thus violating Munn's semantic condition on coordination.

However, Munn's proposal as it is does not seem to be entirely satisfactory. For the following cases, he may need an additional condition on CUCs:

(10) a. John is [AP crazy] and [NP a liar].
b. John is [NP a Republican] and [AP proud of it].
c. I am [VP hoping for an invitation] and [AP optimistic about my chances].
d. John is [AP sick] and [PP in a foul mood].

---

bathroom was] and *[CP how to answer them]* may be in fact NPs in view of the fact that I can add something like 'the question (of)' to the relevant CPs. He also notes that other CPs headed by the complementizer that may be NPs because I can add 'the fact' to that-clause. Based on this observation, he suggests that at least in this particular case, the coordinately conjoined elements must be like categories and not unlike categories. I do not simply buy this suggestion, though. Adding abstract morphemes to the given categories would infinitely expand them and eventually allow all the categories to be uniform including unacceptable cases like (19b), which is to be discussed later in this section.

In all the examples in (10), the coordinately conjoined elements are not adverbials and do not belong to such semantic categories as Manner and Time. Given the two distinct groups of CUCs exemplified by those in (9) and (10), it seems that Munn's (1993) analysis may need (at least) two unrelated conditions on coordination, one for those in (9) and another for those in (10).

Now let us get to Kim's (1996) syntactically oriented ATB movement analysis. First of all, consider the examples in (1-3), repeated here as (11-13):

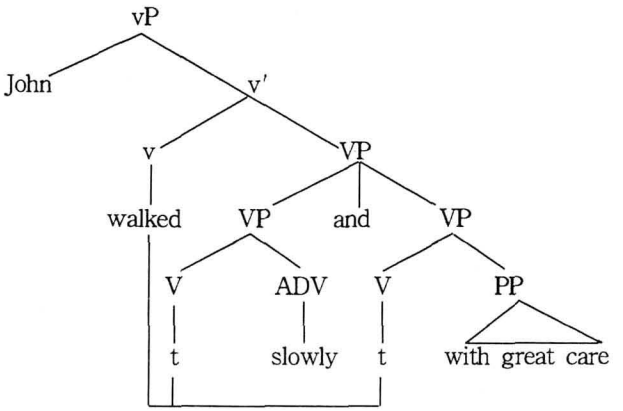
(11) a. John is [$_{AP}$ clever] and [$_{NP}$ a hard-working student].
b. I am [$_{VP}$ hoping to get an invitation] and [$_{AP}$ optimistic about my chances].

(12) a. John walked [$_{ADV}$ slowly] and [$_{PP}$ with great care].
b. They asked [$_{NP}$ the time] and [$_{CP}$ where the bathroom was].

(13) a. [$_{CP}$ That Himmler appointed Heydrich] and [$_{NP}$ the implication thereof] frightened many observers.
b. [$_{ADV}$ Slowly] and [$_{PP}$ with great care] was how they walked.

According to Kim's (1996) analysis, the data in (11-13) are all generated as post-verbal coordination of like categories in the base structure and the surface sentences are derived by the ATB movement of verbs in the course of syntactic derivation. Consider the following putative structure of (12a) provided by Kim:

(14) base structure of (12a)



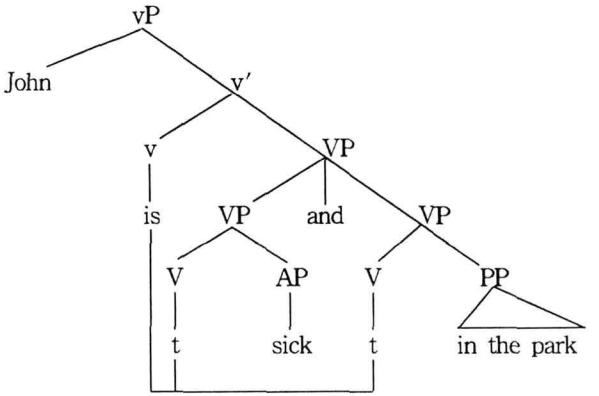
Under Kim's analysis, the verb *walked* generated under the two separate V nodes raises to the higher small *v* node. Before raising of *walked*, the coordinately conjoined constituents are VPs: One is *[VP walk slowly]* and the other *[VP walk with great care]*. At this stage of derivation, these two conjuncts to be conjoined are not unlike categories but likes. This is in accordance with Williams's (1983) original formulation of LCL.

However, there are several potential problems with Kim's analysis. First, Kim recognizes both V-raising and V-reanalysis. In other words, the VP node containing the trace of V and its complement/adjunct should be reanalyzed in the sense that the empty V-node should be "pruned" leaving its complement/adjunct. Reanalysis itself in this case may not be a problem. A more serious problem arises with the unacceptable cases like the following:

(15) *John is sick and in the park.

If Kim's (1996) analysis in terms of the ATB movement is viable, then it is conceivable that the base structure of (15) might be as follows:

(16) putative structure of (15)



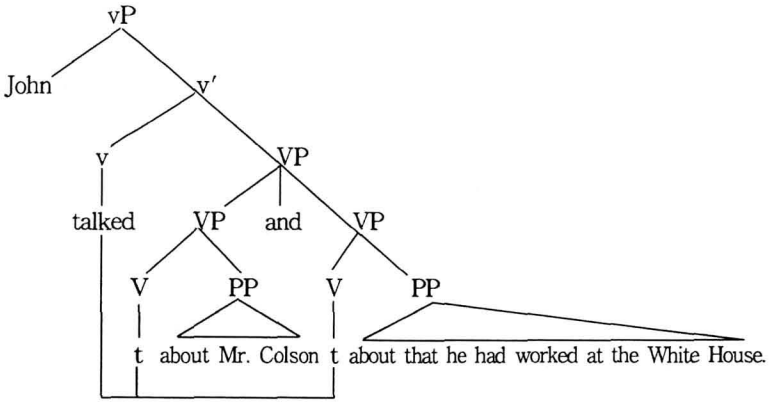
In terms of structure, there is no difference between (14) and (16), but only (15) is acceptable. To prevent such unacceptable cases like (16), Kim (1996) would need (an) additional condition(s).

Another more serious problem with Kim's analysis is that some constituent conjuncts of CUCs are not grammatical on their own. For example, consider the following examples:

(17) a. We talked about [$_{NP}$ Mr. Colson] and [$_{CP}$ that he had worked at the White House].
b. You can depend on [$_{NP}$ my assistant] and [$_{CP}$ that he will be on time].

Notice that (17a) contains two constituents, namely *[$_{NP}$ Mr. Colson]* and *[$_{CP}$ that he had worked at the White House]*. Under Kim's analysis (17a) would be assigned the following base structure:

(18) putative structure of (17a)



Given the putative structure in (18), (17a) consists of the following two constituents:

(19) The constituents of (17a)
a. We talked about Mr. Colson.
b. *We talked about that he had worked at the White House.

The problem is that (17a) contains an ungrammatical clause (19b) as its constituent. As is well known, prepositions are suppressed before *that*-clause or are not compatible with *that*-clause. It is, therefore, quite clear that Kim's analysis as it is may need an additional apparatus to avoid this kind of problem. The same counterargument holds for (17b). That is, (17b) consists of the following constituents:

(20) The constituents of (17b)

a. You can depend on [NP my assistant].
b. *You can depend on [CP that he will be on time].

(20b) is an ill-formed constituent. So it is not clear how I can derive a well-formed coordinate structure out of ill-formed constituents.

In sum, over-generated sentences like (17a) and (17b) should be ruled out by some semantic conditions or other conditions on ATB V-raising under Kim's analysis.

3. A New Analysis

I propose that the following semantic constraint is at work in the coordination of unlike categories:

(21) A Semantic Condition on Coordinatioon
Constituents can be coordinately conjoined if they are semantically connected with each other.

What (21) is intended to mean is that the constituents that are to be coordinately conjoined must be semantically or pragmatically interconnected through anaphoric relationship, through being members of a semantically common set, or through being targets of focus.

The condition (21) accounts for the facts in CUCs like those in (22) below in a different way from other syntactically-oriented accounts such as Kim (1996) or Munn (1993). Consider the following examples:

(22) a. Pat is [NP a Republican] and [AP proud of it].
b. Pat is [AP healthy] and [PP of sound mind].
c. That was [NP a rude remark] and [PP in very bad taste].

In (22a), the two conjuncts *[NP a Republican]* and *[AP proud of it]* are semantically closely connected in the sense that the second conjunct contains the anaphoric expression *it*. Hence conjoining these two constituents observes the condition (21). In (22b), *[AP healthy]* and *[PP of sound mind]* are also semantically closely connected in the sense that they may belong to a common set of semantic features. In other words, being healthy and being of sound mind are both a positive physical condition. To see this

point more clearly, consider the examples in (23):

(23) a. John is tall and strong.
b. ??/*John is tall and weak.
c. John is tall but weak.

It is well known that *tall* and *strong* may belong to a common set of physical features (e.g., a set of physical positiveness). In contrast, *tall* and *weak* may not belong to a common set of physical features, because the former may be a positive value while the latter may be not.[2] Therefore, tall and weak can be conjoined not by conjunctive coordinator "and" (see (23b)) but by contrastive coordinator "but" (see (23c)). Hence *tall* and *strong* can easily be conjoined, but not *tall* and *weak*. Of course in a different context, *tall* and *weak* can belong to a common set of features. Only in that case can they be readily conjoined.[3]

Returning to (23c), *a rude remark* and *in very bad taste* may belong to a common set of features (e.g., a set of negative emotion), thereby being nicely conjoined. Sag et al. (1985), Munn (1993), Bayer (1996), or Kim (1996) do not seem to explain the contrast exhibited in the data in (23). Or these works seem to need an additional apparatus.

There are additional data in support of our claim that coordination of unlike categories is regulated by the semantic condition like (21). Consider the following:

(24) a. John is sick and in a foul mood.
b. *John is sick and in the park.

In (24a), the adjective *sick* and the PP *in a foul mood* belong to syntactically different categories, but they may be classified as belonging to a common set that represents physically undesirable condition/mood. Therefore

---

[2] One of the audience at the conference at Seoul National University points out that being physically positive or negative may pretty much depend on various cultures. I completely agree on this observation. Therefore, I propose a semantically-oriented explanation, rather than a purely syntactic one, of this coordination phenomenon.

[3] Chungmin Lee (personal communication) informs me that Chris Kennedy also finds tall and strong to be members of a common set of semantic features. Unfortunately, the concrete source was not available for the present author.

these two unlike categories can readily be conjoined in a coordinate structure. In (24b), however, the two unlike categories *[$_{AP}$ sick]* and *[$_{PP}$ in the part]* do not belong to a common set of semantic features, thereby violating the condition (21) in forming a coordinate structure.

As discussed earlier, Munn (1993) claims that only the same semantic categories such as Manner adverbials and Time adverbials but not Manner and Time can be coordinately conjoined. The example provided was (9b), repeated here again:

(9b) *John walked [$_{PP}$ with great care] and [$_{PP}$ on Tuesday]. (Manner & Time)

Contrary to his claim, however, the following sentence that has the same syntactic/semantic structure for all intentions and purposes is quite acceptable:

(25) a. How and when did John walk?
b. ?John walked slowly and on Tuesday.

In other words, even Manner and Time adverbials can be coordinately conjoined, only if they are semantically interconnected. In this particular case, the Manner adverb *slowly* and the Time adverbial *on Tuesday* are target of focus. (Note that answers to a wh-question is always focus.)

The semantic condition (21) can also account for the problematic case given in (3a), repeated here as (26):

(26) [$_{CP}$ That Himmler appointed Heydrich] and [$_{NP}$ the implications thereof] frightened many observers.

Note that the sentence (26) is fully grammatical, though it violates Williams's LCL. (26) is problematic for Sag et al. (1985) and Munn (1993), because these analyses claim that CUC takes place with predicative categories. The two conjuncts in (26) are by no means predicative categories. This example is also problematic for Kim's (1996) ATB movement analysis, too. Remember that under Kim's analysis the conjuncts are part of VP containing the verb and the relevant complements/adjuncts, thereby allowing each of the VP categories to be conjoined as like categories in the sense of Williams (1983). In (26), the two relevant conjuncts are not verbal parts but subjects and thus have nothing to do with ATB movement of the

verb. To derive such structure as (26), Kim (1996) would need additional syntactic operations.[4]

However, the semantic condition (21) correctly predicts that (26) is acceptable because the two conjuncts are semantically connected with each other through the anaphoric expression *thereof*. Whether or not the two conjuncts are semantically interconnected can be easily tested. For example, compare (27a) and (27b) below:

(27) a. We talked about Mr. Colson and that he had worked at the White House.
b. *We talked about Mr. Colson and that Mary had worked at the White House.

The acceptable (27a), with *Mr. Colson* and *he* being co-referential, observes the semantic condition (21) because the two conjuncts are semantically connected (through pronominalization). In contrast, the unacceptable (27b) is not acceptable because the two conjuncts are not semantically connected. There is no indication that *Mr. Colson* and *Mary* are related in (27b). However, suppose a situation in which *Mary* is *Mr. Colson*'s wife or his sister. In this situation, it is predicted that (27b) would be much better than it is now.

Recently Bak (2000) proposes independently proposes a similar analysis drawing on a discourse-pragmatic condition such that the conjuncts must form a semantico-pragmatic common meaning, either together with the predicate and/or among themselves. His proposal is essentially not different from my semantic condition (21). However, what is interesting is his treatment of the sentences like (17), repeated here as (28):

(28) a. We talked about [$_{NP}$ Mr. Colson] and [$_{CP}$ that he had worked at the White House].
b. You can depend on [$_{NP}$ my assistant] and [$_{CP}$ that he will be on time].

---

[4] Notice that the verb frightened may be a psych verb. Adopting Belleti and Rizzi's (1988) theory of psych verbs in which the source is (a kind of) predicate and the experiencer is a subject, Kim might be able to assign a structure in which the two conjuncts are part of VP. However, it seems that other verbs than psych ones are also possible in (26). In this case, Kim (1996) may need a special rule for subject conjuncts.

I already saw that (28a-b) each contains two conjuncts, one of which is not acceptable as an independent sentence, as shown below again:

(29) a. *We talked about that he had worked at the White House.
b. *You can depend on that he will be on time.

Regarding these phenomena, Sag et al. (1985 : 166) notes that although only an NP can be an object of a preposition, NP and CP (=S' in their terms) can be objects of a preposition exceptionally in coordinate structures. I don't see this proposal satisfactorily convincing. Bak (2000) suggests that the CP may contain an expletive *it* or an empty noun ∅ as its head noun. Thus the suggested tree structure of the relevant clauses is as follows under his analysis:

(30) a. We talked about [$_{NP}$ Mr. Colson] and [$_{NP}$ it/∅ that he had worked at the White House].
b. You can depend on [$_{NP}$ my assistant] and [$_{NP}$ it/∅ that he will be on time].

It is important to note that in the above sentences, the two conjuncts are assumed to be both NPs, which is different from (28) where the two conjuncts are an NP and a CP. I understand that under Bak's analysis the expletive *it* eventually deletes, thereby yielding the surface structures in (17). In this respect, Bak's analysis is more like Williams's coordination of likes, rather than that of unlikes.

One potential problem with his analysis is that under Bak's analysis I would over-generate the undesirable inverted structures like the following:

(31) a. *We talked about [$_{NP}$ it/∅ that he had worked at the White House] and [$_{NP}$ Mr. Colson].
b. *You can depend on [$_{NP}$ it/∅ that he will be on time] and [$_{NP}$ my assistant].

It is understood that under Bak's analysis the expletive *it* is deleted, thereby yielding the following:

(32) a. *We talked about [NP that he had worked at the White House] and [NP Mr. Colson].
b. *You can depend on [NP that he will be on time] and [NP my assistant].

Under this analysis, there is no way of stopping this kind of unwanted structures from being over-generated. Therefore, there seems to be an additional apparatus to prevent such structures from being generated.

Under the present proposal, however, this kind of problem does not arise because the second conjuncts in (28=30) are not NPs but CPs and therefore cannot be objects of a preposition. It seems that Bak's analysis can as well explain the coordination of unlike categories without the assumption that the CP conjuncts have expletive head noun *it*.

The following data from Section 2 of this paper and from Bak (2000) all fall out under the present analysis.

(33) after copula
a. John is clever and a hard working student.
b. John is asleep or at the office.
c. I am hoping to get an invitation and optimistic about my chances.
d. Paul became a Republican and quite conservative.
(34) adjunct
a. John walked slowly and with great care.
b. They wanted to leave tomorrow or on Thursday.
(35) NP and CP
They asked the time and where the bathroom was.
(36) focus
a. John drinks any kind of liquor and at any time.
b. John has eaten only American food and only in his mother's house.

In all the examples above, the two conjuncts are members of the set of the same semantic features or semantically connected through anaphoric relationship.

4. Distance Effect in Case Licensing

Why then is it the case that CPs can be conjoined in a coordinate structure as a second conjunct of a preposition, as shown in (28=30)? Our

discussion on this issue would rather be somewhat speculative rather than definitive. First of all, consider the following:

(37) a. ??My mom and me go to the movie.
b. My mom and I go to the movie.
(38) a. Me and my mom go to the move.
b. ?I and my mom go to the movie.

In the acquisition of English or in a colloquial speech style, the deictic pronoun *I* is usually realized as *me* in positions other than the immediate pre-verbal position, as shown in (37-38). As Kuno (personal communication) notes, the default form of the first person singular pronoun might be *me* and this pronoun is realized as *I* in the immediate pre-verbal position, or a case position rather than the way round it is the case. Thus in (37a), the pronoun *me* should be realized as nominative case-marked *I*, for its being in a direct case position -- direct in the sense that there is no intervening element in between. On the other hand, in (38a) the first person singular pronoun *me* is not nominative case-marked because it is rather "distant" from the nominative case position due to the intervening element *my mom*. That is to say, it seems that there is some distance effect in rescuing structures that violate some grammatical rules.[5]

Now, let us get back to the relevant data:

(39) a. *We talked about [$_{CP}$ that he had worked at the White House] and [$_{NP}$ Mr. Colson].
b. *You can depend on [$_{CP}$ that he will be on time] and [$_{NP}$ my assistant].

It is clear that *that*-clause cannot be an object of a preposition (for case reason maybe). Hence the ungrammaticality of (39a) and (39b). However, if these offending elements are positioned rather far enough from the direct

[5] Suk-Jin Chang (personal communication) also notes, citing Lakoff, that unacceptable structures sometimes can be rescued if they are far away from the positions where the violation occurs. Unfortunately, the exact reference is not available for me. Anyway, the exact nature of this obviation of grammatical violation is not discovered, to the best of my knowledge, but it seems that the obviation is due to some parsing process.

object position of a preposition, then the resultant structures get much better, as shown in (40) below:

(40) a. We talked about [NP Mr. Colson] and [CP that he had worked at the White House].
b. You can depend on [NP my assistant] and [CP that he will be on time].

In other words, the intervening NPs, namely *[NP Mr. Colson]* in (40a) and *[NP my assistant]* in (40b), save the unacceptable constituents *[CP that he had worked at the White House]* in (40a) and *[CP that he will be on time]* in (40b), respectively.

What we refer to as "distance effect" is also found in binding phenomenon. Consider the following data from Kuno (1991: 7):[6]

(41) a. *Whose$_i$ mother does he$_i$ hate most?
b. ??/*Which picture of John$_i$ did he$_i$ like most?
c. ?Which of John$_i$'s dates did he$_i$ like most?

The unacceptable (41a) is generally known as weak crossover. In terms of bracketing, the wh-phrase *whose* is a specifier of the NP containing it, namely *[NP whose mother]*. In (41b), which is quite deviant but not so totally unacceptable as (41a), the co-indexed NP *John* is inside another NP *[NP which picture of John]*. Finally, in (41c), which is near acceptable or completely acceptable, the co-indexed NP *John* is doubly embedded in that it is first embedded in an NP containing *[NP John's dates]*, which is in turn inside the whole NP *[NP which of [NP John's dates]*. In other words, *John* is most deeply embedded in (14c) and it is most shallow in (41a). Structurally speaking, however, these three examples all share the same in the sense that the pronoun *he* c-commands the co-indexed NPs *John* and *whose* in LF or in D-structure. Therefore, I am led to conclude that the unacceptability due to the violation of binding conditions in those examples

[6] With regard to the rescuing of the violations, Kuno (1991 : 7) calls it Insulation Effect such that "The anti-reflexive rule applies with varying strengths to an R-expression the more deeply embedded the R-expression is in an NP, the weaker its strength. Acceptability or near acceptability results when the R-expression is doubly embedded in NPs.

in (41) is obviated by the distance effect in this case the distance is measured not by intervening phonological elements but by structural embedding.

5. Conclusion

In this paper I examined various types of coordination structures in English, in particular coordination of unlike categories. I have shown that the coordination of the unlike categories poses a serious problem to what is known as the Law of the Coordination of Likes (LCL) formulated in Williams (1983).

I reviewed several previous analyses of this phenomenon and pointed out some problems with these analyses. For example, Kim (1996), Munn (1993), Sag et al. (1985), and 3 (1983), among many others, all try to maintain the the Law of the Coordination of Likes in terms of purely syntactic grounds. In particular, Kim (1996) claims that the coordination of unlike categories, seemingly posing a problem on LCL, are in fact respect the LCL and thus fall into the same domain of analysis. His analysis heavily depends on the across-the-board movement, thereby allowing the same categories to be conjoined.

I have shown that such purely syntactic approaches may not be viable for they over-generate unacceptable structures. As an alternative, I proposed that the coordination of unlike categories can best be accounted for by a semantically oriented condition (5):

(5) A Semantic Condition on Coordinatioon
Constituents can be coordinately conjoined if they are semantically connected with each other.

In Section 2 I briefly reviewed the previous analyses of the CUCs, in particular discussing rather in detail Kim's (1996) analysis based on the ATB movement approach. In Section 3 I proposed a new analysis based on the semantic condition (5) and reexamined the problematic data in view of this condition. In Section 4 I discussed what we refer to as distance effect that seems to operate in rescuing the violation of grammatical rules.

References

Bak, Sung-Yun (2000) 'Coordination in English (written in Korean),' *Discourse and Cognition* 7.2, 187-206.

Belletti, Adriana and Ruigi Rizzi (1988) 'Psych-verbs and -theory,' *Natural Language and Linguistic Theory* 6, 291-352.

Burton, S. & Jane Grimshaw (1992) 'Coordination and VP-internal Subjects,' *Linguistic Inquiry* 23, 305-312.

Chomsky, Noam (1957) *Syntactic Structures*, The Hague, Mouton de Gruyter.

Dougherty, R. (1970) 'A Grammar of Coordinate Conjoined Structures,' *Language* 46, 850-898.

Gazdar, Gerald (1981) 'Unbounded Dependencies and Coordinate Structure,' *Linguistic Inquiry* 12, 155-184.

Goldsmith, John (1985) 'A Principled Exceptions to the Coordinate Structure Constraint,' *Proceedings of the Annual Meeting of the Chicago Linguistic Society* 21.

Grosu, A. (1973) 'On the Nonunitary Nature of the Coordinate Structure Constraint,' *Linguistic Inquiry* 4, 88-91.

Heycock, Caroline & Anthony Kroch (1994) 'Verb Movement and Coordination in a Dynamic Theory of Licensing,' *The Linguistic Review* 11, 257-283.

Johannessen, J. (1998) *Coordination*, New York, Oxford University Press.

Kim, Byung-Kwon (1996) *Gap Dependencies in Coordination*, PhD Dissertation, University of Illinois, Urbana-Champaign.

Kim, Byung-Kwon (1997) 'On Coordination of Unlike Categories,' Paper read at the Meeting of the Korean Generative Grammar Circle, Seoul, Daewoo Foundation Building.

Kuno, Susumu (1991) *Crossover Phenomena and Raising in LF*, Ms, Harvard University, Cambridge.

Lakoff, George (1986) 'Frame Semantic Control of the Coordinate Structure Constraint,' *Proceedings of the Annual Meeting of the Chicago Linguistic Society* 21.

Munn, Allan (1993) *The Syntax of Subordinate and Coordinate Adjunct Clauses*, PhD Dissertation, University of Maryland at College Park.

Ross, John (1967) *Constraints on Variables in Syntax*, PhD Dissertation, MIT.

Sag, Ivan, Gerald Gazdar, Thomas Wasow & S. Weisler (1985) 'Coordination

and How to Distinguish Categories,' *Natural Language and Linguistic Theory* 3, 117-171.

Schacter, Paul (1975) 'Asymmetric Conjunction and Rules of Conversation,' *Syntax and Semantics* 3, 211-232.

Williams, Edwin (1983) 'Semantic vs. Syntactic Categories,' *Linguistics and Philosophy* 6, 423-446.

Department of English Language and Literature
Chung-Ang University
221 Heukseok-dong, Dongjak-gu
Seoul 156-756, Korea
E-mail : yjang@cau.ac.kr